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8 August 1963

MEMORANDUM FOR: Chairman, Technical Development Committee

THROUGH : Executive Secretary, TDC

SUBJECT : Staff Study - Evaluation and Calibration Standardization
for the Microdensitometer

Declass Review by NIMA/DOD

1. PROBLEM:

Standardization of calibration and evaluation of microdensitometers.

2. DISCUSSION:

A proposal for methods of calibrating and evaluating microdensitometers was received from the National Bureau of Standards on the 5th of August 1963. It is proposed that a contract be awarded to this agency to run concurrently with the "Microdensitometer Study." The purpose being that one proposal will supplement the other. At present there is no acceptable standardized calibration technique, and because density measurement varies with procedure and instrument, calibrations are neither reproducible nor generally reliable.

It is felt that this proposal may eventually lead to a standardization of microdensitometer calibration. A discussion with Mr. McCamy on 8 June 1963 led to the subject of standardization and it was the opinion of all concerned that before any norm could be established, a research program would have to be forthcoming. This, in essence, is what the National Bureau of Standards propose to accomplish in the year's interval. This procedure can lead to a standard acceptable to the ASA and become invaluable as a tool for comparison of intensive microdensitometer studies and evaluations now carried on by numerous agencies both governmental and commercial.

3. CONCLUSION:

It is concluded from the facts at hand that it would be invaluable to realize a standardized method for evaluating and calibrating any microdensitometer. The proposal would not be duplicated by the "Microdensitometer Study" but would be supplementary to it. There is a definite requirement for this type of standardization to correlate research programs which have been completed, those now in progress and future programs produced through the use of microdensitometric data. An approved standard for calibration would eliminate erroneous interpretation and duplication of effort in a great number of research programs. It is safe to state that at this time no two companies can produce the same microdensitometric data from identical samples.

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4. RECOMMENDATION:

It is recommended that the Photographic Research Section of the National Bureau of Standards be awarded a contract to undertake the study of methods of calibrating and evaluating microdensitometers. This contract will run concurrently with and be a supplement to the "Microdensitometer Study." The cost of this program will be [REDACTED] and be complete within a year from the date of award of the contract.

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[REDACTED]
Development Branch, P&DS